



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,796	09/29/2006	Barry W. Townsend	183.43731AX0	7124
20457 7590 06/08/2010 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER				
BLANCO, JAVIER G				
ART UNIT		PAPER NUMBER		
3774				
MAIL DATE		DELIVERY MODE		
06/08/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,796

Applicant(s)

TOWNSEND ET AL.

Examiner

JAVIER G. BLANCO

Art Unit

3774

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-16, 24 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-23, 25-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date See Continuation Sheet
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Attachment(s) 3).

Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date: 9/29/2006; 3/28/2007; 4/28/2008; 9/2/2009; 10/16/2009; 2/17/2010; 3/15/2010.

DETAILED ACTION

Election/Restrictions

1. Applicants' election of **Group/Invention II**, claims 17-30, drawn to a resilient lower extremity prosthesis in the reply filed on March 24, 2010 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Applicants' election of **Prosthesis: Species F** (embodied in Figure 43); **Foot Keel: Species I** (embodied in Figure 50); **Calf Shank: Species F** (embodied in Figure 43); and **Configuration of artificial muscle: Species G**: (embodied in Figure 47C) in the reply filed on March 24, 2010 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
3. Claims 1-16, 24, and 29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group/invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 24, 2010.

Specification

4. The disclosure is objected to because of the following informalities: please update the CROSS-REFERENCE TO RELATED APPLICATION section (i.e., "now US"). Appropriate correction is required.

5. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

6. Claim 28 is objected to because of the following informality: please substitute “vascoelastic” (see line 2) with --viscoelastic--. Appropriate correction is required.

Oath/Declaration

7. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because it seems the specification was filed as PCT International Application Number **PCT/US2005/011292**, not PCT/US2005/011291 (as indicated in the Oath/Declaration).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 17-20, 25, 26, 28, and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Atkinson et al.** (US PG Pub No 2002/0087216 A1; cited in Applicants' IDS).

Referring to Figures 11, 12, and 20, **Atkinson et al.** disclose a resilient lower extremity prosthesis comprising:

- a. A foot (Figures 11/12: keel 454; Figure 20: keel 754) extending in a longitudinal direction;
- b. A resilient ankle (Figures 11/12: ankle 412; Figure 20: ankle 712);
- c. An elongated, upstanding, resilient shank (Figures 11/12: upper leg 414 and/or pylon 452; Figure 20: upper leg 714 and/or pylon 752) above the ankle; wherein the ankle and shank are formed as a resilient member, the shank extending upward in a substantially curvilinear manner above the ankle and flexing in the longitudinal direction during gait *for storing and releasing energy to improve dynamic response of the prosthesis in gait*;
- d. An artificial muscle (Figures 11/12: visco-elastic cord 486; Figure 20: visco-elastic belt/strap 786) provided on at least one of the foot, ankle and shank of the prosthesis *for storing energy during force loading of the prosthesis in the active propulsion phase of a person's gait and in the later stages of stance-phase of gait releasing said energy to aid propulsion of the person's trailing limb and body*.

Regarding claim 18, at least see paragraphs 0095, 0096, and 0118.

Regarding claims 19 and 20, the means for adjusting are cam 490/492 and/or pads 496 (Figures 11 and 12), and pad 806 (Figure 20).

Regarding claims 25 and 26, see Figures 9, 10, 11, and 20.

Regarding claim 28, see listing of materials in paragraphs 0094 and 118.

Regarding claim 30, see Figure 20.

10. Claims 17-23, 25-27, and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Fikes** (US 4,911,724; cited in Applicants' IDS).

Referring to Figures 1A, 2A, and 4-6, **Fikes** discloses a resilient lower extremity prosthesis comprising:

- a. A foot (30) extending in a longitudinal direction;
- b. A resilient ankle (ankle of foot 30 and/or base member 12);
- c. An elongated, upstanding, resilient shank (11) above the ankle; wherein the ankle and shank are formed as a resilient member, the shank extending upward in a substantially curvilinear manner above the ankle and flexing in the longitudinal direction during gait *for storing and releasing energy to improve dynamic response of the prosthesis in gait*;
- d. An artificial muscle (64, 66, and/or 68) provided on at least one of the foot, ankle and shank of the prosthesis *for storing energy during force loading of the prosthesis in the active propulsion phase of a person's gait and in the later stages of stance-phase of gait releasing said energy to aid propulsion of the person's trailing limb and body*.

Regarding claim 18, the artificial muscle is preloaded in tension.

Regarding claims 19 and 20, see bladder 60.

Regarding claims 21-23 and 27, see Figure 1A ("artificial muscle" 34A), Figure 4 ("artificial muscle(s)" 64), and Figure 6 ("artificial muscle(s)" 64).

Regarding claims 25 and 26, see Figures 4 and 5 showing "artificial muscles" 66 and 68 provided on said resilient member.

Regarding claim 30, see Figure 4.

11. Claims 17-23, 25-28, and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Phillips** (US 5,387,246; cited in Applicants' IDS).

Referring to Figures 2, 7-9, and 12, **Phillips** discloses a resilient lower extremity prosthesis comprising:

- a. A foot (Figure 2: foot keel 24; Figure 9: foot keel 137) extending in a longitudinal direction;
- b. A resilient ankle (Figure 2: ankle 36; Figure 7: ankle 106; Figure 9: ankle 142);
- c. An elongated, upstanding, resilient shank (Figure 2: shank 22; Figure 7: shank 92; Figure 9: shank 136) above the ankle; wherein the ankle and shank are formed as a resilient member, the shank extending upward in a substantially curvilinear manner above the ankle and flexing in the longitudinal direction during gait *for storing and releasing energy to improve dynamic response of the prosthesis in gait*;
- d. An artificial muscle (Figure 2: rubber block 76, stiffener member 34, and/or restraining strap 70; Figure 9: rubber block 76, stiffener member 134, and/or shock cord 132) provided on at least one of the foot, ankle and shank of the prosthesis *for storing energy during force loading of the prosthesis in the active propulsion phase of a person's gait and in the later stages of stance-phase of gait releasing said energy to aid propulsion of the person's trailing limb and body*.

Regarding claim 18, said artificial member is preloaded in tension.

Regarding claims 19 and 20, see bladder 62 (Figure 2) and bladder 138 (Figure 9).

Regarding claims 21-23 and 27, see "artificial muscle" formed by combination of 76 and 78 (Figure 2) and "artificial muscle" formed by combination of 76, 78, and/or 132 (Figure 9).

Regarding claims 25 and 26, see Figures 2, 7, 9, and 12. Notice the claim language of independent claim 17 does not define, or distinguish, "anterior" from "posterior".

Regarding claim 28, the visco-elastic material of the artificial muscle is disclosed as being rubber or polymer (e.g., elastomeric).

Regarding claim 30, see Figures 1 and 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javier G. Blanco whose telephone number is 571-272-4747. The examiner can normally be reached on M-F (9:00 a.m.-7:00 p.m.), first Friday of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on **(571)272-4749**. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Javier G. Blanco/

Examiner, Art Unit 3774

/David H Willse/

Primary Examiner, Art Unit 3738